REMARKS

Claims 1-6, 9-12 and 14-18 are pending in this application, claims 7, 8 and 13 having been cancelled by the above amendment. Of these claims, claims 1 and 3-18 stand rejected under 35 USC §102(b) as being anticipated by Kwon et al.; and Claim 2 stands rejected under 35 USC §103(a) as being unpatentable over Kwon et al. in view of De Jesus et al. The specification has been objected to because of the informality identified on page 3 of the Office Action. The drawings have been objected to as failing to comply with 37 CFR 1.84(p)(5) for the reasons set forth on page 2 of the Office Action. The Abstract of the Disclosure has been objected to because it exceeds 150 words.

In view of the preceding amendments and the following remarks, these rejections and objections are traversed, and reconsideration of this application is respectfully requested.

By the above amendment, corrections have been made to the specification in the second paragraph on page 5, the first and third paragraphs on page 6, and the first paragraph on page 7. It is believed that these amendments address the objection to the drawings and the objection to the specification. It is therefore respectfully requested that these objections be withdrawn.

By the above amendment, the length of the Abstract has been reduced to less than 150 words. It is therefore respectfully requested that the objection to the Abstract of the Disclosure be withdrawn.

Applicant's claimed invention is a key-pad device that includes a plurality of keys and a key-pad controller that responds to pressing of the keys. The controller determines which key is pressed by a process having a predetermined number of steps, where the number of steps is the same regardless of which key is activated.

By the above amendment, independent claim 1 has been amended above to include the language previously found in dependent claims 7 and 8 to now state that the controller adds key press values assigned to each key when the keys are pressed, and compares the added key value to a predetermined value to determine if multiple keys have been simultaneously pressed. Independent claim 10 has been amended in the same manner with the language previously found in claim 13. Independent claim 15 has also been amended to include the limitation that the added key value is compared to a predetermined value to determine if multiple keys have been simultaneously pressed. Applicant respectfully submits that the prior art of record, whether taken alone or in combination, fails to teach this aspect of Applicant's claimed invention.

U.S. Patent No. 5,264,845 issued to Kwon et al. discloses a key scan circuit that does not require a diode for preventing a short circuit during a key scan operation. The Kwon et al. key scan circuit scans rows and columns of keys on a key pad to determine which keys have been pressed. A first memory MA is initialized with the bits 0000 and a second memory MB is initialized with the bits 1111, where the memory MA is used to determine if a key is pressed in one of the columns and the memory MB is used to determine if a key is pressed in one of the rows. If no keys are pressed, then the memories remain 0000 and 1111. If a key is pressed on the keypad, then one of the bits in the memory MA will be changed to a 0 depending on what column the key is in, and one of the bits in the memory MB will be changed to a 1 depending on what row the key is in. In other words, one of the bits in the memory MA is changed if any key is pressed in the column that that bit represents, and one of the bits in the memory MB is changed if any key is pressed in the row that that bit represents.

Column 4, lines 30-42 gives an example of how the bits in the memories MA and MB are read to determine that the ninth key in the key pad matrix is pressed where the memory MA will be 1011 and the memory MB will be 0010. If more than one key is simultaneously pressed, indicating an error, the key scan circuit will put more than one 0 in the memory MA or more than one 1 in the memory MB, and an error will be issued. (Column 4, lines 14-21).

Applicant respectfully submits that the Kwon et al. key scan circuit determines which key on the key pad is pressed by a different process than that claimed by Applicant. Applicant submits that Kwon et al. does not assign each key a predetermined key press value, but uses the four bit memories MA and MB to determine which key has been pressed. Because there are eight total bits in the memories MA and MB, and there are sixteen keys, there is not a key value for each key, particularly where the key values are added together as claimed by Applicant.

Further, Applicant submits that the Kwon et al. key scan circuit does not determine that multiple keys have been simultaneously pressed by adding each key value for each key that is pressed and then comparing the added value to a predetermined value. As discussed above, what Kwon et al. does do to determine if multiple keys have been simultaneously pressed is to determine if more than one bit is 0 in the memory MA or more than one bit is 1 in the memory MB. Applicant submits that these processes are different for determining which key is pressed as now claimed by Applicant.

It is therefore respectfully requested that the §102(b) rejection be withdrawn.

U.S. Patent No. 5,832,206 issued to De Jesus et al. discloses an apparatus for providing security for a keypad processor. It is believed that the Examiner is relying on De Jesus et al. to teach a key pad including a display and a magnetic strip

reader. However, Applicant submits that De Jesus et al. does not teach a key-pad and decoder that determines which key on the key pad has been pressed as discussed above. Therefore, Applicant submits that De Jesus et al. fails to provide the teaching missing from Kwon et al. to make Applicant's claimed invention obvious. It is therefore respectfully requested the §103(a) rejection be withdrawn.

It is now believed that this application is in condition for allowance. If the Examiner believes that personal contact with Applicant's representative would expedite prosecution of this application, the Examiner is invited to call the undersigned at his convenience.

Respectfully submitted,

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